CLAIMS

1. A method of forming a slotted substrate while minimizing a chip count in a shelf surrounding a slot, the method comprising:

depositing a thin film over a substrate; and

forming the slot in the substrate through a slot region that extends through the substrate and the thin film.

2. The method of claim 1 wherein the thin film is a metal film.

3. The method of claim 1 wherein the thin film is a polymer film.

4. The method of claim 1 wherein the thin film is a dielectric film.

5. The method of claim 1 wherein the thin film is a ductile material.

6. The method of claim 1 wherein the deposited thin film is under compression.

7. The method of claim 1 wherein the slot is formed mechanically.

8. The method of claim 1 wherein the substrate is silicon, and the thin film is field oxide.

9. The method of claim 1 wherein a plurality of thin films are deposited over the substrate, wherein the slot region extends through the plurality of thin films, wherein a thickness of the plurality of thin films ranges from 0.25 microns up to about 50 microns.

10. The method of claim 1 wherein the thin film is at least one of silicon nitride and silicon carbide.

11. The method of claim 1 wherein the thin film is PSG.

12. A method of forming a slotted substrate while minimizing crack formation in a shelf surrounding a slot, the method comprising:

depositing a thin film over a substrate; and

forming the slot in the substrate through a slot region that extends through the substrate and the thin film.

13. A method of forming a slot in a substrate comprising:

depositing a ductile thin film over a substrate; and

forming a slot in the substrate through a slot region that extends through the substrate and the ductile thin film.

14. The method of claim 13 wherein the thin film is a metal film.

15. The method of claim 13 wherein the thin film is a dielectric film.

16. The method of claim 13 wherein the thin film is a polymer film.

17. The method of claim 13 wherein the thin film is deposited in a compressive state.

18. The method of claim 13 wherein the thin film is a passivation layer.

19. The method of claim 13 wherein the thin film is an insulating layer grown from the substrate.

20. A coated substrate for a center feed printhead comprising:

a substrate;

a polymer film applied over the substrate; and

a slot region extending through the substrate and the polymer film.

21. A coated substrate for a center feed printhead comprising:

a substrate;

a metal film applied over the substrate; and

a slot region extending through the substrate and the metal film.

22. The substrate of claim 21 wherein the metal film is aluminum.

23. The substrate of claim 21 wherein the metal film is tantalum.

24. The substrate of claim 21 wherein the metal film is tantalum aluminum.

25. The substrate of claim 21 wherein a thickness of the metal film is at least 0.25 microns.

26. The substrate of claim 21 wherein the metal film is under compressive stress.

27. The substrate of claim 21 further comprising a cavitation barrier layer, wherein the slot region extends through the cavitation barrier layer.

28. The substrate of claim 21 further comprising a passivation layer, wherein the slot region extends through the passivation layer.

29. The substrate of claim 21 further comprising a dielectric layer, wherein the slot region extends through the dielectric layer.

30. The substrate of claim 21 further comprising a polymer layer, wherein the slot region extends through the polymer layer.

31. A coated substrate for a center feed printhead comprising:

a substrate;

a film applied over the substrate, wherein a thickness of the film is at least about 2.5 microns ; and

a slot region extending through the substrate and the film.

32. A center feed printhead comprising:

a substrate;

a metal film applied over the substrate; and

a slot region extending through the substrate and the metal film.